



U.S. Department
of Transportation
**Pipeline and
Hazardous Materials
Safety Administration**

**IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE USA/0158/S-96, REVISION 6**

400 Seventh Street, S.W.
Washington, D.C. 20590

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and the United States of America² for the transport of radioactive material.

1. Source Identification - E.I. DuPont/New England Nuclear Model NER-479C.
2. Source Description - Cylindrical single encapsulation made of Type 316L stainless steel and heli-arc seal welded. Approximate outer dimensions range from 15.2 mm (0.6 in.) to 38.1 mm (1.5 in.) in diameter and 5.6 mm (0.22 in.) to 12.7 mm (0.5 in.) in length. The active face has a wall thickness of approximately 0.25 mm (0.01 in.). Construction shall be in accordance with attached New England Nuclear Corp. Drawing No. 313-306, dated 9-11-78.
3. Radioactive Contents - No more than 74.0 GBq (2.0 Ci) of Americium-241. The Am-241 is in the form of a ceramic.
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations¹ shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors in the United States exporting shipments under this certificate shall satisfy the applicable requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires on February 28, 2012.

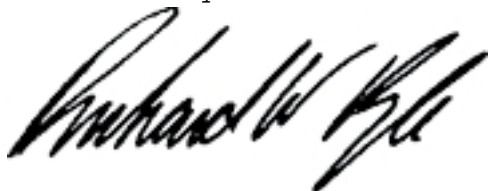
¹ "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency(IAEA), Vienna, Austria.

² Title 49, Code of Federal Regulations, Parts 100-199, United States of America.

CERTIFICATE USA/0158/S-96, REVISION 6

This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the October 02, 2006 petition by J.L. Shepherd, San Fernando, CA, and in consideration of other information on file in this Office.

Certified By:



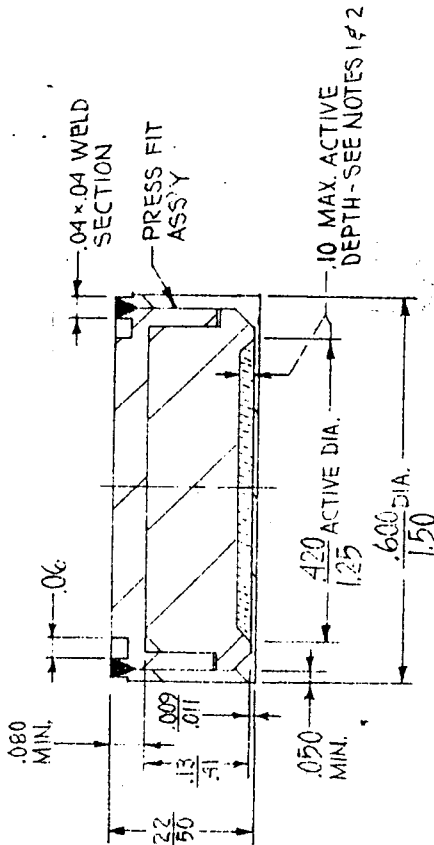
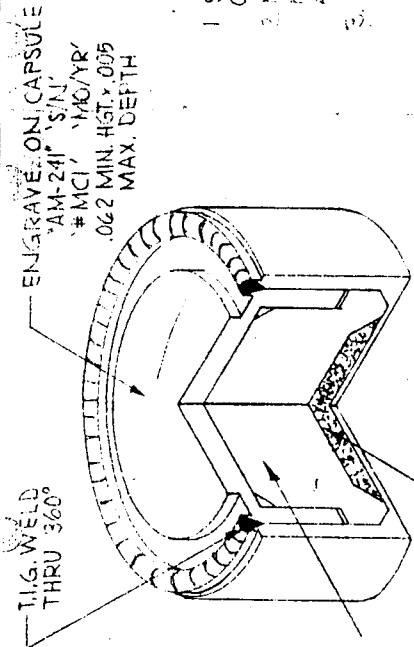
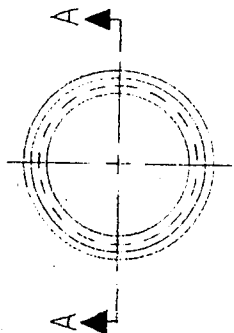
Feb 16 2007

(DATE)

 Bob Richard

Deputy Associate Administrator for Hazardous Materials Safety

Revision 6 - Issued to renew the expiration date.



SECTION A-A

NOTES

1. SOURCE MATRIX CONSISTS OF AM-241 AS A VITREOUS CERAMIC FUSED TO THE INSERT FORMING A CERAMIC GLAZE.
2. MAXIMUM ACTIVITY CONCENTRATION SHALL BE 2000 MCI/MAXIMUM ACTIVITY CONCENTRATION SHALL BE 1.25 CI/CM² ACTIVE AREA. A TLE DIA/ACTIVE HST. RATIO TO BE 5:1 MIN.
3. INSERT TO WHICH THE SOURCE MATRIX IS FUSED, SHALL BE CRES 316L STL. OR AN ALUMINO-SILICATE MACHINABLE CERAMIC (MELTING POINT ~2000°C AFTER FIRING AND SUBSEQUENT COOLING).
4. LEAK TEST PER ANSI N542-1977 PROCEDURES A2.1.1, SMEAR TEST, A2.1.3, IMMERSION TEST AND A2.2.1, BUBBLE TEST. SEE NS2A TEST DIRECTIVE 603. LIMIT 100⁻³ CI.
5. ANSI N542-1977 PERFORMANCE CLASSIFICATION C644.
6. D.O.T. 'SPECIAL FORM' MATERIAL PER 10CFR 71.4.

NEW ENGLAND NUCLEAR CORP.

MATERIAL SPECIFICATIONS		FRACTIONAL	DECIMAL	ANGULAR	NEW ENGLAND NUCLEAR CORP.	
CRES 316L STL. STL.		1/64	XX ± .010 XX ± .005	± 30'	BOSTON, MASS.	
DRAWN	J. SUMARES	REV.	DATE	SCALE	NAME	DRAWING NO.
CHECKED			9-11-78	N.T.S.	NER-479C AM-241 L.E.	313-306
APPROVED					PHOTON SOURCE	
DO NOT SCALE DRAWING						



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CERTIFICATE NUMBER: USA/0158/S-96, Revision 6

ORIGINAL REGISTRANT(S):

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